EXHIBIT F Claim Chart – U.S. Patent No. 9,336,307

Claim I. An The preamble of apparatus or claim I is not system for locally recording locally recording audio, said locally recording audio, said locally generated locally generated audio ando also may be wirelessly transmitted to a wirelessly remote recorder as remotely recorded aremotely remoted and recorded as remotely remoted and recorded as remotely remoniter, such remoted at a using a recorder as remotely remoniter, such remotely as a Lectrosonics recorder as remotely remoniter. at least one local audio device wearable by a creator of said locally generated audio metally generated audio au	CLAIM	DISCUSSION	INFRINGING LETROSONICS DEVICE
us or claim 1 is not limiting. Nonetheless, the PDR (1) is an apparatus for locally recording locally recording locally recording locally generated audio. The locally generated audio may be wirelessly transmitted to a remote recorded as remotely recorded and recorded as remotely recorded data using a Lectrosonics wireless wing: transmitter, such as a Lectrosonics of data wireless transmitter. The PDR (1) is a local audio device wearable by a creator of locally generated audio ally generated audio generated audio generated audio generated audio local surface wearable by a creator of locally generated audio generated audio ally generated audio local surface wearable by a creator of locally generated audio generated audio ally generated audio local surface wearable by a creator of locally generated audio local surface wearable by a creator of locally generated audio local surface wearable by a creator of locally generated audio local surface wearable by a creator of locally generated audio local surface wearable by a creator of locally generated audio local surface wearable by a creator of locally generated audio local surface wearable by a creator of locally generated audio local surface wearable by a local surface	Claim 1. An	The preamble of	Fig. 1
for limiting. Nonetheless, the PDR (1) is an apparatus for ced locally recording locally generated audio. The locally generated audio. The locally generated audio may be wirelessly transmitted to a remote recorder and recorded as remotely recorded data using a Lectrosonics w C70 cable and transmitter. The PDR (1) is a local audio device wearable by a creator of locally generated audio ally generated audio generated audio generated audio generated audio local audio device wearable by a creator of locally generated audio ally generated audio generated audio generated audio local audio generated audio ally gener	apparatus or	claim 1 is not]
Nonetheless, the PDR (1) is an apparatus for ed locally recording locally generated audio. The locally generated audio. The locally transmitted to a remote recorder and recorded as remotely recorded data using a d by, Lectrosonics MC70 cable and transmitter, such as a Lectrosonics wireless sing: The PDR (1) is a local audio device wearable by a creator of locally generated audio	system for	limiting.	2 / 1
apparatus for ed locally recording apparatus for locally recording locally generated audio. The locally generated audio may be wirelessly transmitted to a remote recorder and recorded as remotely recorded data using a d by, Lectrosonics e MC70 cable and transmitter, such as a Lectrosonics wireless wireless ing: transmitter. The PDR (1) is a local audio device wearable by a creator of locally generated audio generated audio	locally	Nonetheless, the	
apparatus for locally recording locally generated audio. The locally ed generated audio may be wirelessly transmitted to a remote recorder and recorded as remotely recorded data using a d by, Lectrosonics MC70 cable and transmitter, such as a Lectrosonics wireless ing: The PDR (1) is a local audio device wearable by a creator of locally generated audio ally generated audio ng:	recording	PDR(1) is an	
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generated audio may be wirelessly transmitted to a sly remote recorder tted and recorded as remotely recorded data using a Lectrosonics MC70 cable and r as transmitter, such as a Lectrosonics d data wireless sing: transmitter. one Idio local audio device wearable by a le by a creator of locally of agenerated audio ally ed	locally	audio. The locally	to Color of the Co
transmitted to a remote recorder tted and recorded as remotely recorded y data using a d by, Lectrosonics e MC70 cable and transmitter, such as a Lectrosonics d data wireless ing: transmitter. one The PDR (1) is a ldio wearable by a le by a creator of locally of generated audio ally ed	generated	generated audio	
transmitted to a remote recorder and recorded as remotely recorded y data using a Lectrosonics MC70 cable and r as transmitter, such as a Lectrosonics d data wireless ing: transmitter. one The PDR (1) is a local audio device wearable by a le by a creator of locally of generated audio ally ed	audio also	may be wirelessly	
remote recorder tted and recorded as remotely recorded as remotely recorded as remotely recorded data using a Lectrosonics MC70 cable and transmitter, such as a Lectrosonics d data wireless sing: transmitter. one The PDR (1) is a local audio device wearable by a le by a creator of locally of generated audio ally ed	being	transmitted to a	
tted and recorded as remotely recorded y data using a Lectrosonics MC70 cable and transmitter, such as a Lectrosonics d data wireless sing: transmitter. one The PDR (1) is a local audio device wearable by a creator of locally of generated audio ally ed	Wirelessly	remote recorder	
y d by, e e r as y d data d data one ldio le by a of ally ally	transmitted	and recorded as	EX. N (PDR Data Sneet) at 1.
y, s s s s s s s s e e e e e e e e e e e	10, and	remotely recorded	
y y y	remotely	data using a	
s s lata lata g: g: y y	recorded by,	Lectrosonics	
s s lata lata e e e e e o o o o o y a o y a	a remote	MC70 cable and	
lata g: g: g: o	recorder as	transmitter, such	
lata g: g: o o o o o o o o o o o o o o o o o	remotely	as a Lectrosonics	
y 3y a 9	recorded data	wireless	
у у	comprising:	transmitter.	
у эу а	at least one	The PDR (1) is a	
у а	local audio	local audio device	
у а У	device	wearable by a	
У	wearable by a	creator of locally	
У	creator of	generated audio	
generated audio including:	said locally		
audio including:	generated		
including:	audio		
	including:		

Introduction Congratulations on your purchase of the PDR (Personal Digital Recorder), On occasion, there is a need to record and to incrimistances where a traditional till sized recorder is impractical or even impossible. Whether It might be an extreme sport, a public speaking event, a wedding or a next impossible location sound recording, the PDR and trade with your subject and recording the PDR and trade with your subject and recorder is unpostible and an extreme sport, a public speaking event, a wedding or a next impossible location sound recording the PDR and trade with your subject and recorder is unpostible and an extreme sport, a public speaking event, a wedding or a next impossible location sound recording the PDR can trade with your subject and recorder is unpostrusive and easily hidden in garments and costumes, and easy to conceal when it is a more consisting at includes a Time PDR (1) also includes an analysis of the properties of the prop			
Introduction Congratulations on your purchase of the PDR (Personal Digital Recorder). On occasion, there is a need to record audio in circumstances where a traditional full sized recorder is impractical or even impossible. Whether it might be an extreme sport, a public speaking event, a wedding or a next to impossible location sound recording, the PDR is designed for the difficult audio capture. When talent is at an extreme distance or using a wireless microphone is not practical (knights in armor come to mind), the PDR can travel with your subject and record professional quality audio, synchronized with timecode. The recorder is unobtrusive and easily hidden in garments and costumes, and easy to conceal when used as a "plant" microphone to capture environmental or location sound. Ex. L (PDR Manual) at 2; see also Ex. K (PDR Data Sheet) at 1.	Fig. 3 2 Audio Input 5 Headph Line ou Micro SD card slot cover 4 3 Ex. L (PDR Manual) at 4.	The PDR (1) includes a Time Code Sync Port (3) coupled to hardware and/or software/firmware for receiving time data, e.g., time data from a timecode generator. The PDR (1) also includes an Audio Input (2) coupled	at least one local audio device receiver for receiving at least one of the group consisting of digital data, time data, and audio data;
Fig. 2	Congratulations on your purchase of the PDR (Personal Digital Recorder). On occasion, there is a need to record audio in circumstances where a traditional full sized recorder is impractical or even impossible. Whether it might be an extreme sport, a public speaking event, a wedding or a next to impossible location sound recording, the PDR is designed for the difficult audio capture. When talent is at an extreme distance or using a wireless microphone is not practical (kniights in armor come to mind), the PDR can travel with your subject and record professional quality audio, synchronized with timecode. The recorder is unobtrusive and easily hidden in garments and costumes, and easy to conceal when used as a "plant" microphone to capture environmental or location sound. Ex. L (PDR Manual) at 2; see also Ex. K (PDR Data Sheet) at 1.		
	Fig. 2		

"dweedle tones" data in the form of decoding digital software/firmware of the PDR (1). various functions for controlling for receiving and to hardware and/or Fig. 4 *Id.* at 7. TC Jam (jam timecode) Remote source is used to jam the unit. Timecode data is logged operation. successful, a message will be displayed to confirm the sync will take place automatically. When the sync is into the BWF metadata. code source. Connect the timecode source and the LCD and the unit is ready to be synced with the time-When TC Jam is selected, JAIN NOW will flash on the tone" signals from the Lectro RM remote control or to Timecode defaults to zero at power up if no timecode The default setting is "no." "yes" (remote control on) and "no" (remote control off). ignore them. Use the arrow buttons to toggle between The recorder can be configured to respond to "dweedle cable in place during recording. jamming timecode. DO NOT leave timecode WARNING: Take your headphones off when

Fig. 5 Id. at 9. LectroRN settings available in LectroRM for the PDR are: preted by the transmitter as a configuration change. The audio tone sequence of ("dweedle tone") that are interoperating systems. Its purpose is to remotely control By New Endian LLC LectroRM's remote control mechanism is the use of an received by the attached microphone, will alter the conthrough the use of encoded audio tones, which when The app remotely changes settings on these units LectroRM is a mobile application for iOS and Android Apple App Store and Google Play Store. Lectrosonics transmitters and PDR recorder, including: figured setting. The app was released by New Endian, .LC. The app is available for download and sells on the • | | PDR (pending - not active as of Oct 13, 2016) L Series SM Series Record Stop Lock/unlock Absolute or relative level controls

Claim Chart – U.S. Patent No. 9,336,307

EXHIBIT F

Claim Chart – U.S. Patent No. 9,336,307

at least one audio input includes an Audio port for receiving said locally generated audio from an audio input device, said audio input device wearable by a creator of said locally generated audio; The PDR (1) Input (2) for receiving locally generated audio from an audio input device (e.g., a wearable microphone, such as a wearable lavalier microphone).	
Versatility and Compatibility The PDR recorder can be tethered to a camera to capture a higher quality or backup audio recording. The headphone output doubles as a line output to feed the AV input on a camera. The input connector is the industry standard TA5M jack that accepts any mic or line level signal, and provides bias voltage to power a wide variety of electret lavaliere microphones. The input connection and wiring is compatible with microphones pre-wired for "compatible" and "servo bias" configurations to feed 5-pin inputs on Lectrosonics wireless microphone transmitters. Ex. L (PDR Manual) at 2.	Time Code Connector: Signal voltage: Input impedance: Format: Ex. K (PDR Data Sheet) at 2.

Claim Chart – U.S. Patent No. 9,336,307 **EXHIBIT F**

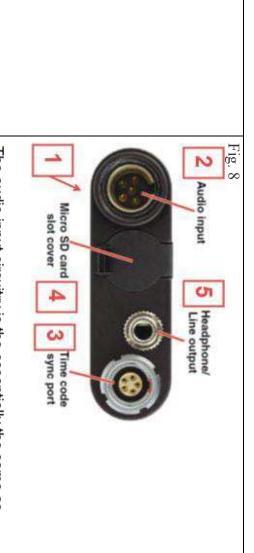


Fig. 9 Id. at 4. bias" will work with the PDR. See page 10 for details. crophone wired as Lectrosonics "compatible" or "servo on Lectrosonics SM and L Series transmitters. Any mi-The audio input circuitry is the essentially the same as

5-Pin Input Jack Wirin

of microphones and other audio inputs. Some microon the diagrams shown. phones may require extra jumpers or a slight variation the basic wiring necessary for the most common types The wiring diagrams included in this section represent

:

Claim Chart – U.S. Patent No. 9,336,307

Audio input jack wiring:

Fig. 10

and line level inputs. microphones. Shield (ground) for dynamic microphones Shield (ground) for positive biased electret lavaliere

PIN 2

voltage source for 4 volt servo bias wiring. microphones that are not using servo bias circuitry and Bias voltage source for positive biased electret lavaliere

PIN 3

Microphone level input and bias supply.

PIN 4

Pin 3 voltage depends on Pin 4 connection. Bias voltage selector for Pin 3.

Pin 4 tied to Pin 1: 0 V Pin 4 Open: 2 V

Pin 4 to Pin 2: 4 V

PIN 5

instruments, etc. Line level input for tape decks, mixer outputs, musical

Id. at 10.

Fig. 11 Input

Type:

Input level:

Input connector:

Id. at 11.

microphones

Dynamic mic: 0.5 mV to 50 mV

servo bias preamp for 2V and 4V lavaliere Analog mic/line level compatible;

 Line level: 17 mV to 1.7 V Electret mic: (need spec in uA?)

TA5M 5-pin male

at least one The PDR (1) control unit necessarily electrically includes a control					at least one memory; and includes a memory slot and a microSD memory card (4) for insertion within the slot.	
	Ex. L (PDR Manual) at 3.	Insert the card with the label facing the keypad side of the recorder.	:	300x 32GB III UHS speed class 32GB UHS bus type	Compatible memory cards The card should be a microSDHC memory card, speed class 10, or any UHS speed class, 4GB to 32GB. The recorder supports the UHS-1 bus type, marked on the memory card with an I symbol. An example of typical markings:	

																			memory;	data in said	local audio	storing said	data and	local audio	for creating	said memory	device, and	audio input	receiver, said	audio device	said local	coupled to
creating local	card (4) for	microSD memory	and (iii) the	of the PDR (1);	various functions	for controlling	"dweedle tones"	data in the form of	decoding digital	as well as for	audio input device,	audio from the	locally generated	for receiving	software/firmware	and/or	related hardware	Input (2) and	data; (ii) the Audio	for receiving time	software/firmware	hardware and/or	(3) and related	Code Sync Port	to (i) the Time	circuitry, coupled	and/or other	software/firmware,	hardware,	controller,	a processor,	unit, in the form of
																								Ex. L (PDR Manual) at 2; see also Ex. K (PDR Data Sheet) at 1.	The coordinal and and of vidoo canning community.	with essentially any audio or video editing software	synctrionize them in the timeline of a video clip. The	the audio tracks include time data to make is easy to	With a timecode sync at the start of the production,		Broadcast Wave Format	Fig. 13

Claim Chart - U.S. Patent No. 9,336,307

audio data and storing the local audio data in the microSD memory card (4).

Fig. 14

File Naming

Filenames of the recordings can be set as a progressive sequence of numbers or as the time of the internal clock at the beginning of the recording.

Backlight

The recorder backlight can be set to turn off after either 5 minutes or 30 seconds, or stay on continuously.

at Type

Choose either Alkaline or Lithium battery type. The voltage of the installed battery will be shown at the bottom of the display.

Date & Time

Set the date and time on the recorder by using the MENU/SEL button to toggle through the options and the UP and DOWN arrow buttons to choose the appropriate number. Date and time are preserved during battery changes. Date and time are independent of the time-

code. Date and time are preserved in the file attributes, timecode is written inside the file. The Main Window will indicate the time elapsed since the last power up or the timecode if it has been "jammed." If, however, the unit has been left without power for more than 90 minutes, the time and date will need to be reset.

Ex. L (PDR Manual) at 7.

Claim Chart – U.S. Patent No. 9,336,307

Broadcast Wave Format With a timecode sync at the start of the production, the audio tracks include time data to make is easy to synchronize them in the timeline of a video clip. The industry standard BWF (wav) file format is compatible with essentially any audio or video editing software. Versatility and Compatibility The PDR recorder can be tethered to a camera to capture a higher quality or backup audio recording. The headphone output doubles as a line output to feed the AV input on a camera. The input connector is the industry standard TA5M jack that accepts any mic or line level signal, and provides bias voltage to power a wide variety of electrel tavallier microphones. The input connection and wiring is compatible with microphones pre-wired for "compatible" and "servo bias" configurations to feed 5-pin inputs on Lectrosonics wireless microphone transmitters. Setup and adjustment is made through an intuitive interface provided by the keypad and LCD. In keeping with typical Lectrosonics mechanical designs, the housing is machined from a solid aluminum billet for the rugged-ness needed in field production. Ex. L (PDR Manual) at 2.	ed Fig.	The local audio data of the PDR (1) may be retrieved (e.g., played back) and the local audio data may be combined with remotely recorded audio data.	wherein said local audio data may be retrieved after said locally recording and combined with said remotely recorded audio data.
Firmware Updates Firmware updates are made using the micro SD card. Download and copy the following firmware update files to a drive on your computer. • pdr vX_xx.ldr is the firmware update file, where "X_xx" is the revision number. d. at 8.	Fig. 15 Firmw Down to a d • p ") Id. at 8.		

		thereof.
		and
		identifiers,
		nerformer
		device
		local audio
		identifiers,
		track
		the group consisting of
		selected from
Ex. L (PDR Manual) at 2; see also Ex. K (PDR Data Sheet) at 1.		identifier
	identifiers.	at least one
	consisting of track	data includes
synchronize them in the timeline of a video clip. The	of a filename,	local audio
the audio tracks include time data to make is easy to	at least a portion	wherein said
	identifier, such as	to claim 1,
Broadcast Wave Format	(1) includes an	system
Fig. 17	The local audio	Claim 2. A

Claim Chart – U.S. Patent No. 9,336,307

Fig. 18

File Naming

Filenames of the recordings can be set as a progressive sequence of numbers or as the time of the internal clock at the beginning of the recording.

Backlight

The recorder backlight can be set to turn off after either 5 minutes or 30 seconds, or stay on continuously.

at Type

Choose either Alkaline or Lithium battery type. The voltage of the installed battery will be shown at the bottom of the display.

Date & Time

Set the date and time on the recorder by using the MENU/SEL button to toggle through the options and the UP and DOWN arrow buttons to choose the appropriate number. Date and time are preserved during battery changes. Date and time are independent of the timecode. Date and time are preserved in the file attributes, timecode is written inside the file. The Main Window will indicate the time elapsed since the last power up or the

Ex. L (PDR Manual) at 7.

the time and date will need to be reset.

timecode if it has been "jammed." If, however, the unit has been left without power for more than 90 minutes.

Claim 3. An	The PDR (1) is in	Fig. 19
apparatus or system	the form of a body pack.	Introduction
according	۲	Congratulations on your purchase of the PDR (Per-
to claim		sonal Digital Hecorder). On occasion, there is a need to record audio in circumstances where a traditional
1 wherein		full sized recorder is impractical or even impossible.
said at least		Whether it might be an extreme sport, a public speaking
one local		event, a wedding or a next to impossible location sound recording, the PDR is designed for the difficult audio
is at least one		capture. When talent is at an extreme distance or using
hodypack		a wireless microphone is not practical (knights in armor
ŀ		and record professional quality audio, synchronized with
		in garments and costumes, and easy to conceal when
		or location sound.
		Ex. L (PDR Manual) at 2; see also Ex. K (PDR Data Sheet) at 1.
Claim 4. An	The person	
apparatus or	creating locally	
system	generated audio	
according	using the PDK (1)	
to claim	is a live performer,	
1 wherein	such as an athlete,	
said creator	public speaker,	
01 8810	wedding.	
locally	participant, or	
generated	other performing	
audio is a	talent.	
live		
performer.		

said at least one local audio device

wireless

transmitter).

Ex. L (PDR Manual) at 4

Micro SD card

slot cover

4

ယ

sync port

device (such as headphones or a

further includes:

according to claim

outputting said

local audio to an

Output (5) for

Headphone/Line

1 wherein

audio output

Claim 5. An apparatus or

includes a

The PDR (1)

Fig.

Audio input

O

Headphone/ Line output Ex. L (PDR Manual) at 2

EXHIBIT F

Claim Chart – U.S. Patent No. 9,336,307

Fig. 20 a wireless microphone is not practical (knights in armor used as a "plant" microphone to capture environmental in garments and costumes, and easy to conceal when and record professional quality audio, synchronized with come to mind), the PDR can travel with your subject capture. When talent is at an extreme distance or using event, a wedding or a next to impossible location sound Whether it might be an extreme sport, a public speaking sonal Digital Recorder). On occasion, there is a need or location sound timecode. The recorder is unobtrusive and easily hidden recording, the PDR is designed for the difficult audio to record audio in circumstances where a traditional full sized recorder is impractical or even impossible. Congratulations on your purchase of the PDR (Peritroduction

Upon information and belief, Lectrosonics sells an MC70 cable designed to permit the PDR (1) to be coupled to a wireless transmitter (such as a Lectrosonics SM transmitter) for wirelessly coupling the PDR (1) to a remote receiver/recorder.	
Id. at 7.	
HEADPHONE arrows to adjust the loudness	
Output deselect HEADPHONE (no highlight) then use	
HEADPHONE	
Output	
The output can be configured as a line level output or as a headphone output. Press MENU/SEL to highlight the selected output type and use the UP and DOWN arrows to change the setting. Press BACK or MENU/SEL to save the setting.	port.
Fig. 22 Output	at least one audio output

EXHIBIT FClaim Chart – U.S. Patent No. 9,336,307



The PDR (1) is capable of transmitting local audio via Headphone/Line Output (5) to a receiver or recorder, directly by wired

5 wherein

said locally generated audio is

transmitted

connection or

according

Claim 6. An apparatus or system

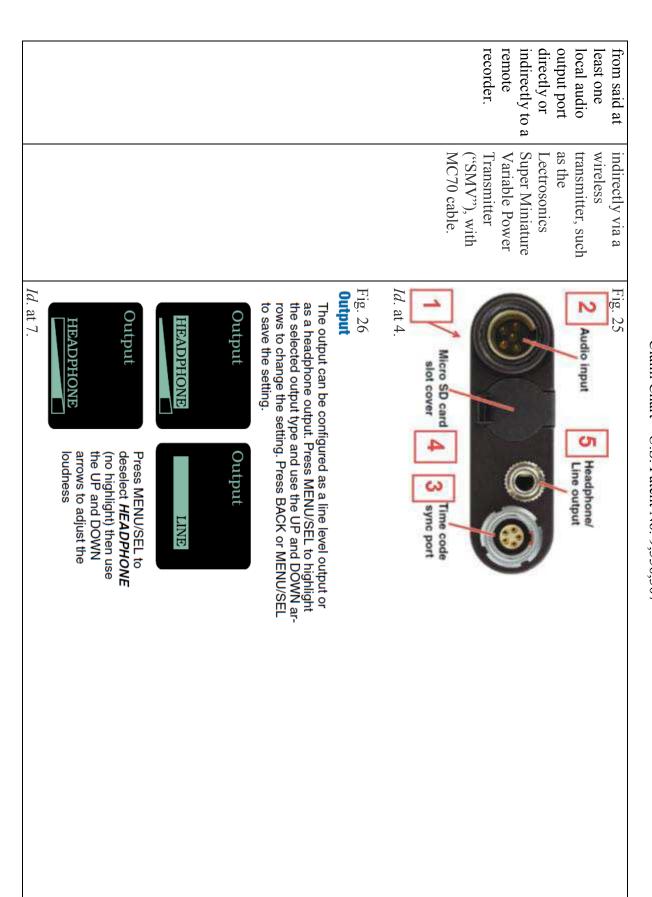
to claim

Fig. 24

Versatility and Compatibility

The PDR recorder can be tethered to a camera to capture a higher quality or backup audio recording. The headphone output doubles as a line output to feed the AV input on a camera.

Ex. L (PDR Manual) at 2.





Claim Chart – U.S. Patent No. 9,336,307

said audio input device is a microphone.

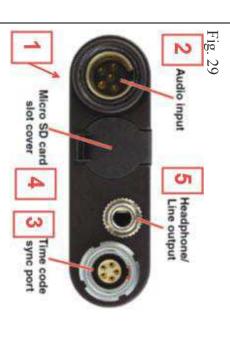
1 wherein

Fig. 28 Versatility and Compatibility

The PDR recorder can be tethered to a camera to capture a higher quality or backup audio recording. The headphone output doubles as a line output to feed the AV input on a camera.

The input connector is the industry standard TA5M jack that accepts any mic or line level signal, and provides bias voltage to power a wide variety of electret lavaliere microphones. The input connection and wiring is compatible with microphones pre-wired for "compatible" and "servo bias" configurations to feed 5-pin inputs on Lectrosonics wireless microphone transmitters.

Ex. L (PDR Manual) at 2



The audio input circuitry is the essentially the same as on Lectrosonics SM and L Series transmitters. Any microphone wired as Lectrosonics "compatible" or "servo bias" will work with the PDR. See page 10 for details.

Id. at 4.

Claim Chart – U.S. Patent No. 9,336,307

Fig. 30

5-Pin Input Jack Wiring

of microphones and other audio inputs. Some microthe basic wiring necessary for the most common types on the diagrams shown. phones may require extra jumpers or a slight variation The wiring diagrams included in this section represent

Fig. 31

:

Audio input jack wiring:

PIN 2 microphones. Shield (ground) for dynamic microphones and line level inputs. Shield (ground) for positive biased electret lavaliere

PIN 3

Microphone level input and bias supply.

microphones that are not using servo bias circuitry and

Bias voltage source for positive biased electret lavaliere

voltage source for 4 volt servo bias wiring.

PIN 4 Bias voltage selector for Pin 3.

Pin 3 voltage depends on Pin 4 connection.

Pin 4 Open: 2 V

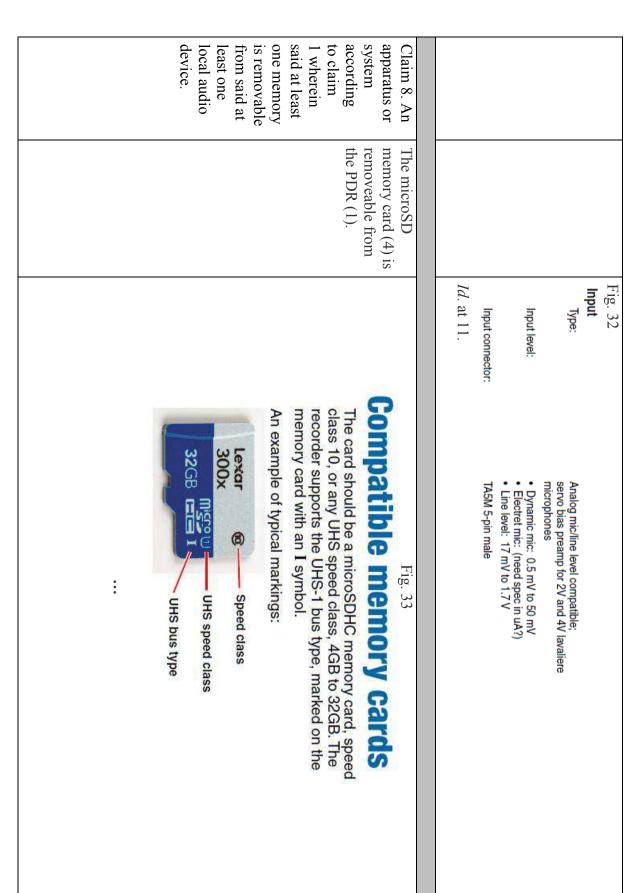
Pin 4 tied to Pin 1: 0 V Pin 4 to Pin 2: 4 V

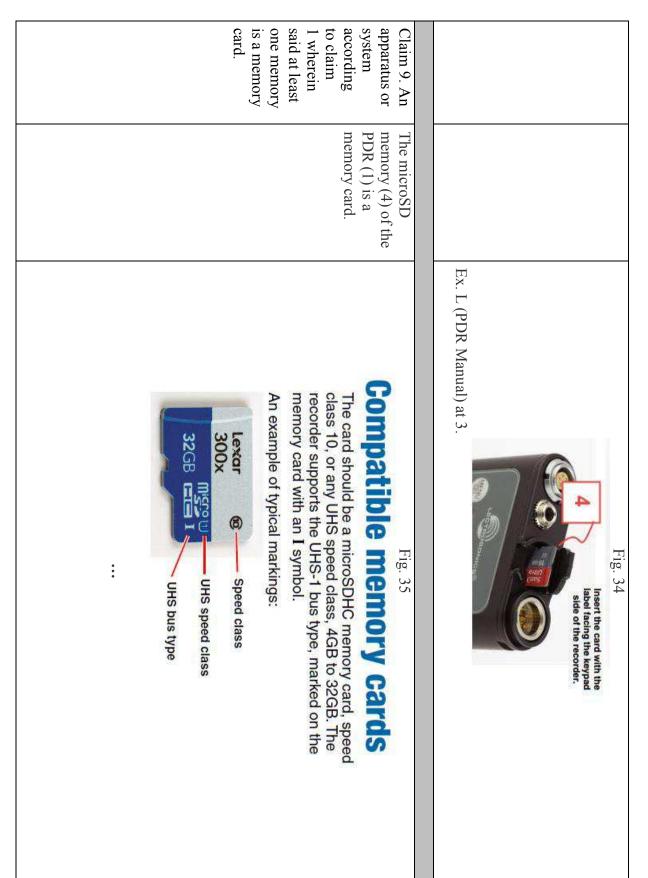
PIN 5

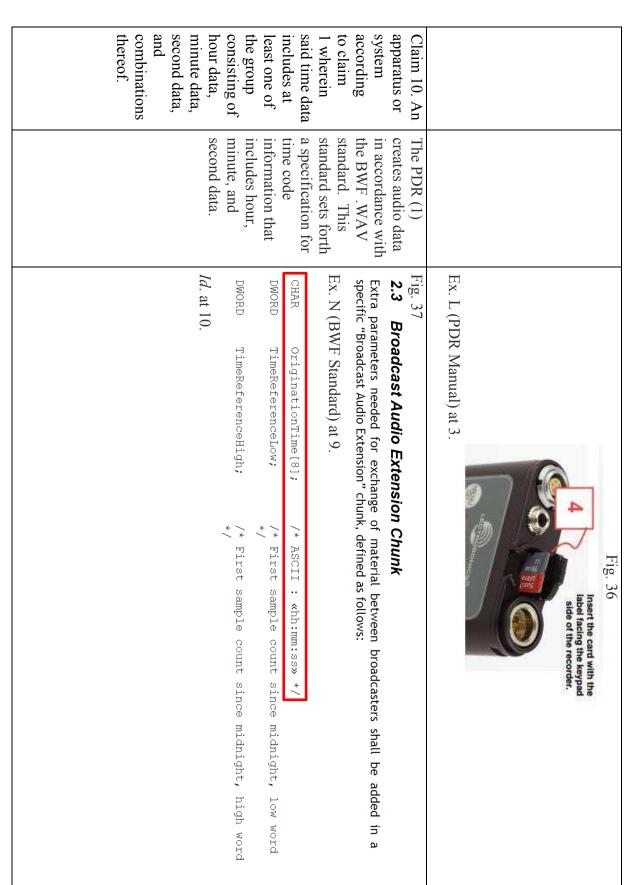
Line level input for tape decks, mixer outputs, musical

instruments, etc.

Id. at 10







Claim Chart - U.S. Patent No. 9,336,307

<i>Id.</i> at 11.	<u>TimeReference</u>				Fig. 38 OriginationTime
or samples per second depends on the sample frequency which is defined in the field <nsamplespersec> from the <format chunk="">.</format></nsamplespersec>	These fields shall contain the time-code of the sequence. It is a 64-bit value which contains the first sample count since midnight. The number	'-' hyphen '_' underscore ':' colon '' space '.' stop	The separator between the items can be anything but it is recommended that one of the following characters be used:	Hour is defined from 0 to 23. Minute and second are defined from 0 to 59.	8 ASCII characters containing the time of creation of the audio sequence. The format shall be « 'hour'-'minute'-'second'» with 2 characters per item.